CONSOLIDATED INFORMATION TECHNOLOGY SERVICES TASK ASSIGNMENT (TA)

1. **TITLE:** (D306) SYSTEM ADMINISTRATION FOR THE HYPERSONIC AIRBREATHING PROPULSION BRANCH

TA No:	RBI001-Rev9		
Task Area Monitor:		**Alternate Task Area Monitor:**	
NASA POC:	None	**Software Control Class:**	Low Control
Type of Task:	Non-Recurring Task		

2. BACKGROUND

Computing equipment for the Hypersonic Airbreathing Propulsion Branch (HAPB) consists of a heterogeneous network of workstations for use by HAPB personnel, contractors and guests and several compute clusters that are dedicated to parallel processing. These workstations and clusters include both unclassified and classified (to the SECRET level) systems. The unclassified computers and clusters are generally accessible via Langley's unclassified network, LaRCNET. Classified computers and clusters are located in limited access rooms that have been approved for classified computing. These computers and clusters are either stand-alone or are connected to other classified systems via Langley's Hypersonic Information Dedicated Network (HIDN) through NSA-approved encryption devices. Software on the HAPB systems includes advanced data visualization, CFD grid-generation and other specialized pre- and post-processing tools. On-site system administration for hardware and software is required to maintain the computers, network security and resource availability for use by NASA personnel, contractors and grantees, within and outside of the Langley network domain.

3. OBJECTIVE

The objective of this task assignment is to provide system administration support for the Hypersonic Airbreathing Propulsion Branch computer facilities.

4. GENERAL IT SUPPORT SERVICES

Services Specified Through Exhibit A:
Refer to Exhibit A, Inventory of Equipment and Software that defines the required General IT Support Services.

The services of System and IT Security Administration shall be provided for systems with "System and IT Security Administration Required" checked in Exhibit A. The level of security shall be consistent with the information category identified by the code checked for each such system (see NPG 2810.1). If these services are not required for the system as a whole,

they shall be provided for any isolated processors where the information category code is entered in the SSA column.

Any system software, application software, or database software that is licensed to run on a particular item of equipment is entered in the respective column for that item. Software that does not require a license is also included if it is relevant to any of the required services.

The services of Hardware Maintenance (HM), System Software Management (SSM), Applications Management (AM) and Database Administration (DBA), are required for the items of equipment or software that are checked in the respective columns of Exhibit A.

Customer Support and IT Consultation and Training:
The Contractor shall provide the basic level of Customer Support and IT Consultation and Training given in Sections 4.7 and 4.8 of the SOW for all General IT Support Services.

Exceptions and Additional Requirements:
Responsibilities under this task shall include the administration of dedicated communication links/networks used for classified computing and the associated hardware and software. Also see section on "Special Security Requirements."

The Contractor shall assist the government in the preparation of System Security Authorization Agreements and with periodic Security Audits conducted by the Office of Security.

The Contractor shall conduct periodic and random risk and vulnerability assessments and analyses for LaRC computer systems as requested by system owners. When periodic scans are performed, the Contractor shall prepare reports documenting the type of vulnerabilities, a threat level rating, a short list of protective measures that are in place or planned and those that are recommended. These reports may also address risks that are deemed acceptable by the system owner and identify those that are not acceptable to the Center. The contractor shall support the analysis of and provide responses to the findings of risk assessments and penetration tests conducted by other organizations. The contractor shall evaluate the methodology, analysis and results used by the auditing agencies and provide comments on how to correct valid deficiencies and address areas requiring further clarification. Repair noted vulnerabilities for equipment covered in Exhibit A. Upon request, the Contractor shall review existing ITS plans or checklists and suggest ways of improving their completeness, effectiveness, or applicability to the LaRC infrastructure and environment.

For systems that are covered under vendor or third-party hardware or software maintenance contracts, the Contractor shall obtain quotes for replacement parts or upgrades and provide to the LaRC point of contact for procurement.

The Contractor shall assist the Government in coordination of construction of new computer facilities and relocation of computer equipment.

The Contractor shall perform backups for indicated systems (computers listed as active and with SA support) in Exhibit A. In addition, every six months the contractor shall demonstrate the ability to restore backed-up files by restoring (to another machine or hard drive) all of the files of one user. The selected user shall be different each time until the list of users has been completed. This shall be done for both the unclassified and classified systems.

During each work week, the Contractor shall check daily the operation of the HAPB compute clusters and identify servers, compute nodes and related hardware and software that are not operating properly and take corrective action to restore full functionality. The daily check will include verifying that MPI software works properly on all of the compute nodes.

The Contractor shall assist Government personnel in the operation and maintenance of encryption equipment necessary to maintain secure network connections to classified computing facilities. The Contractor shall also provide necessary information to maintain certification to process classified information as required by the LaRC Office of Security and Public Safety.

Contractor personnel will be located on-site in the HAPB office area. Computer systems shall be set up to operate 24 hours per day, 7 days per week. Operations shall be monitored outside of normal working hours and problems will be reported to designated persons who shall respond and initiate correction of the problem.

General IT Support Services Performance Metrics

Performance Standard: Inventory of equipment and software is up-to-date and accurate.

Performance Metrics:

Exceeds: "Meets" and: semi-annual audit finds no deviations from the actual configuration; or improvements have been made to the configuration management system.

Meets: Data format is satisfactory, semi-annual audit finds only minor deviations from actual configuration, and tracking log is up-to-date.

Fails: Any of the requirements of this subsection (a through c) are not satisfied.

Performance Standard: Response to requests for help is given within two hours. Customer requests are tracked and appropriate expert advice is sought when needed. Appropriate and correct advice is given

Performance Metrics:

Exceeds: "Meets" and customers rate service as very-good to excellent.

Meets: Response to requests for help is given within two hours. Customer requests are tracked and appropriate expert advice is sought when needed. Customers rate service as satisfactory or better.

Fails: Customers rate service as unsatisfactory

Performance Standard: All systems to which these services apply are maintained to OEM standards. Upon failure, they are repaired to minimize the disruption of capability. The integrity and security of data is maintained.

Performance Metrics:

Exceeds: "Meets" and: incipient failures are recognized and acted upon; or repairs are accomplished ahead of schedule.

Meets: Equipment failures are identified within 2 hours of occurrence (or beginning of first prime shift following occurrence) and satisfactory repairs are affected on the schedule agreed to by the contractor and line manager before the repair is initiated. Data is restored to status of the last available back-up

Fails: Any of the requirements of this subsection (a through g) is not satisfied.

Performance Standard: The security of systems and data that fall under this TA is ensured

Performance Metrics:

Exceeds: The system meets the baseline IT security requirements for an information category with more stringent requirements than the information category of the system; there are no unpatched vulnerabilities, unless the vulnerability has been mitigated by other action, accepted by line management and approved by the LaRC IT Security Manager; user accounts are removed by the close of business of the day that the requirement for an account is terminated.

Meets: All baseline IT security requirements for the information category are either met or have a waiver for non-compliance from the LaRC IT Security Manager; the system is up-to-date with security patches or has scheduled the installation of such patches at the completion of a test that precludes immediate installation; user accounts are removed within one week of the termination of the requirement for an account; any IT Security incidents are reported to the LaRC IT Security Manager as soon as possible after they are discovered.

Fails: The system does not comply with the baseline IT security requirements for the information category and does not have a waiver for non-compliance from the LaRC IT Security Manager; the system is not up-to-date with IT security patches; user accounts, for which the requirement was terminated have not been removed after a period of two weeks; the system has an IT security incident that is not reported to the LaRC IT Security Manager.

5. SYSTEM AND APPLICATION DEVELOPMENT SERVICES

None required.

6. WORK-AREA SPECIFIC SERVICES

None required.

7. Exhibit A

Exhibit A

8. SPECIAL SECURITY REQUIREMENTS

A SECRET Clearance is required to administer the equipment in classified areas.

A communication security (COMSEC) clearance is required to administer the classified network equipment.

The Contractor shall provide the primary point of contact for all COMSEC issues for Buildings 1268 and 1221.

9. SOFTWARE ENGINEERING PROCESS REQUIREMENTS

None required.

10. JOINT REVIEW SCHEDULE

There will be a joint review of the work of this task at meetings to be held monthly at a time mutually agreed upon by NASA and the Contractor. The following persons or their alternates are required to attend: the NASA technical monitor and Contractor personnel assigned to the task. Technical performance, timeliness and cost will be discussed.

11. PERIOD OF PERFORMANCE

This TA is effective from 02/01/01 to 04/27/10

12. TECHNICAL PERFORMANCE RATING

In evaluating Technical Performance, quality and timeliness shall be rated as follows:

Quality: 60%   Timeliness: 40%

13. RESPONSE REQUIREMENTS

This Task Plan shall address the contractor's specific work plans, associated estimated labor hours, cost and schedule.

14. GOVERNMENT ESTIMATED COST

15. FUNDING INFORMATION

Funding has not been entered for this TA.

16. MILESTONES

None required.

17. DELIVERABLES

Number	Deliverable Item	Deliverable Schedule
1	Monthly progress reports which shall include both work accomplished during the month and a list of	Each month

	outstanding work.	

18. FILE ATTACHMENTS

None.